



Primary Health Care Management Advancement Programme

ASSESSING INFORMATION NEEDS



**MODULE 1
USER'S GUIDE**

THE PHC MAP SERIES OF MODULES, GUIDES AND REFERENCE MATERIALS

Each module includes:

- a User's guide
 - a Facilitator's guide
 - computer programs
- Module 1 Assessing information needs
Module 2 Assessing community health needs and coverage
Module 3 Planning and assessing health worker activities
Module 4 Surveillance of morbidity and mortality
Module 5 Monitoring and evaluating programmes
Module 6 Assessing the quality of service
Module 7 Assessing the quality of management
Module 8 Cost analysis
Module 9 Sustainability analysis

Manager's guides and references

- Better management: 100 tips
- Problem-solving
- Computers
- The computerised PRICOR thesaurus

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Cover Photo: A community health worker of the Aga Khan Community Health Programme in Bangladesh visits a mother and child identified by the management information system to be at high risk.
Photo by: Jean-Luc Ray for the Aga Khan Foundation (AKF)



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Primary Health Care Management Advancement Programme

ASSESSING INFORMATION NEEDS

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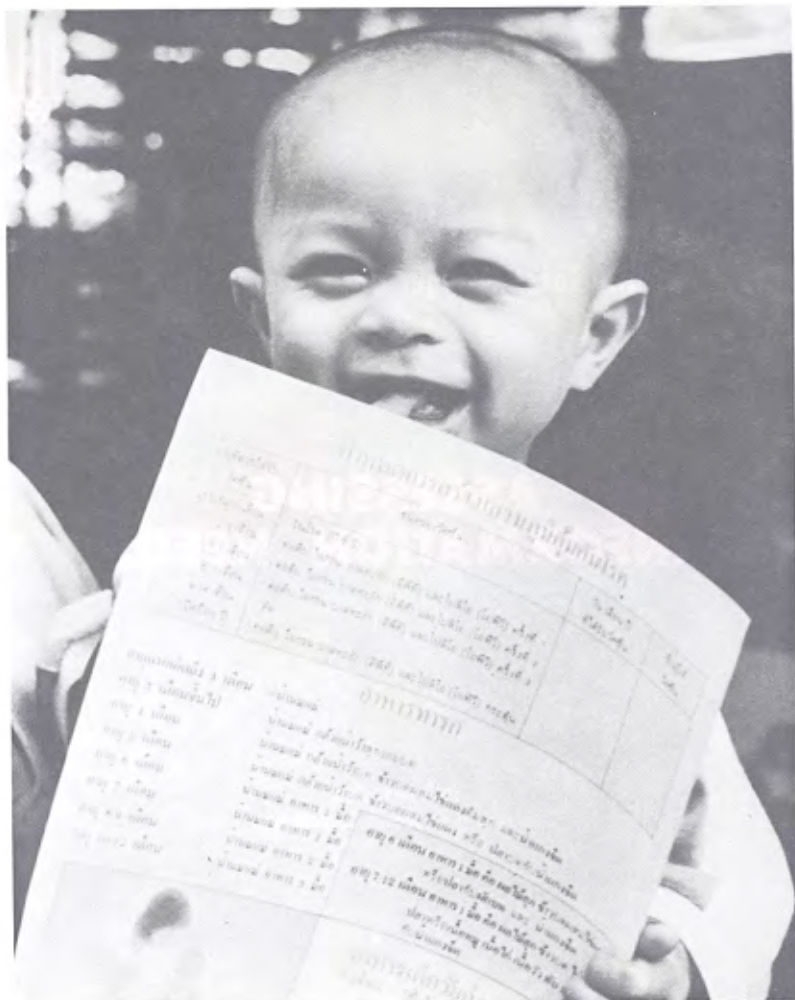
MODULE 1 USER'S GUIDE



Aga Khan Health Services



University Research Corporation
Center for Human Services



A picture of good health in Thailand
Photo by D. Taylor for WHO

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*Dedicated to
Dr. Duane L. Smith (1939-1992) ,
Dr. William E. Steeler (1948-1992)
and all other health leaders, managers and workers
who follow their example in the effort to bring quality health
care to all in need.*





A village health education session in Peru
Photo by Y. Pouliquen for WHO



The Primary Health Care Management Advancement Programme: An overview

The main constraint reported by practically all countries is inadequate information for the managerial process...to provide systematic and analytical information for continuous assessment of the situation, determination of priorities, improvement of management and evaluation. The information generated by the traditional health system is, in most countries, quite insufficient.¹

The main purpose of the Primary Health Care Management Advancement Programme (PHC MAP) is to help local PHC management teams collect, process, and analyse useful management information.

Initiated by the Aga Khan Foundation, PHC MAP is a collaborative programme of the Aga Khan Health Network² and PRICOR³.

An experienced design team and equally experienced PHC practitioner teams have worked together to develop, test and refine management advancement procedures. PHC projects in several countries have participated, including those in Bangladesh, Chile, Colombia, the Dominican Republic, Guatemala, Haiti, India, Indonesia, Kenya, Pakistan, Senegal, Thailand, and Zaire. They have also taken an active role in pretesting the PHC MAP materials to make sure that they are understandable, easy to use and helpful to PHC managers.

Management information needs are changing in PHC. There has been a gradual movement in recent years toward decentralising PHC management. Central governments have begun to shift responsibility for PHC to local managers and communities. Managers are being given specific goals and are being held accountable for achieving them. This movement is likely to continue and will place new responsibilities on local PHC managers.

1 Evaluation of the Strategy for Health for All by the Year 2000, Geneva: World Health Organization, May 1987.

2 The network includes the Aga Khan Foundation, the Aga Khan Health Services and the Aga Khan University, all of which are involved in the strengthening of primary health care.

3 Primary Health Care Operations Research, a worldwide project of the Center for Human Services funded by the US Agency for International Development.



They will have to do more of their own planning, carry out more of their own monitoring, and make more of their own management decisions.

To be successful they will need better, more timely, and more useful management information.

Although a great deal of effort has gone into developing management information systems (MIS) at central levels, much of this information is of little use at the local level.

Generally, the problem isn't a lack of information (there is an excess of information), but a lack of useful information for local planning and monitoring. In addition, many local managers do not have the tools or training necessary to collect and process their own management data.

This problem exists in practically all PHC programmes. Appropriate, accurate, and timely information is absolutely essential to good management. Managers need to know what must be done and to monitor what is being accomplished. Without this information, a manager cannot provide knowledgeable leadership, improve productivity, assess needs, or mobilise resources.

PHC MAP includes nine units called modules. Each module is designed to help managers collect, process, and interpret information for a different management purpose. The nine modules are briefly described on the next page.

There is a user's guide for each module which defines basic terms, provides guidelines for using the module, and explains how to adapt it to fit local conditions.

The modules are not expected to be adopted exactly as written. Rather, they are expected to be modified and have been prepared accordingly. For example, the modules include sample data collection and data processing instruments (checklists, questionnaires, templates, forms, etc.) that show how to gather and process data manually. These tools can be photocopied, revised, or rearranged, as needed. Most modules also include optional computer programs and instructions. There is also a Hyperpad program for each module. These programs graphically describe each module and take users step-by-step through the module's procedures. Computers are helpful, but not necessary to use the modules. PHC MAP modules can be applied manually, without using a computer at all.



1. Assessing information needs.

This module helps managers to identify information needs, set priorities, and determine which PHC MAP modules are likely to be of most use to them.

2. Assessing community health needs and coverage.

This module provides PHC managers with simple tools to gather required data on community health needs for planning programme strategies and resource use. The managers can use the same instruments later to assess programme effects on health knowledge, behaviour, and coverage, as well as programme impact on morbidity and mortality.

3. Planning and assessing health worker activities.

A module that supervisors and other managers can use to help field workers and clinic staff plan their work better. It shows how to identify individuals in need of services, set realistic targets, assess individual performance, and take corrective action, if warranted.

4. Surveillance of morbidity and mortality.

The module describes the basic indicators of morbidity and mortality to be included in a PHC surveillance system. It discusses how to set up a surveillance system, how to monitor the occurrence of diseases, how to identify causes of mortality and morbidity, and how to use that information to improve programme planning and implementation.

5. Monitoring and evaluating programmes.

Lists of indicators and guidelines that managers can use to monitor PHC and management activities for short periods. Managers can also use them to construct a project-specific "mini-MIS."

6. Assessing the quality of service.

Simple, but comprehensive, discussion guides and checklists of essential service resources and processes. Supervisors can use these to assess the quality of care provided and to set priorities for improving service delivery.

7. Assessing the quality of management.

Discussion guides and checklists for assessing PHC management services (planning, training, supervision, etc.).

8. Cost analysis.

This module can help PHC managers to set up simple systems to monitor costs themselves. They can also make projections about future revenues and expenses.

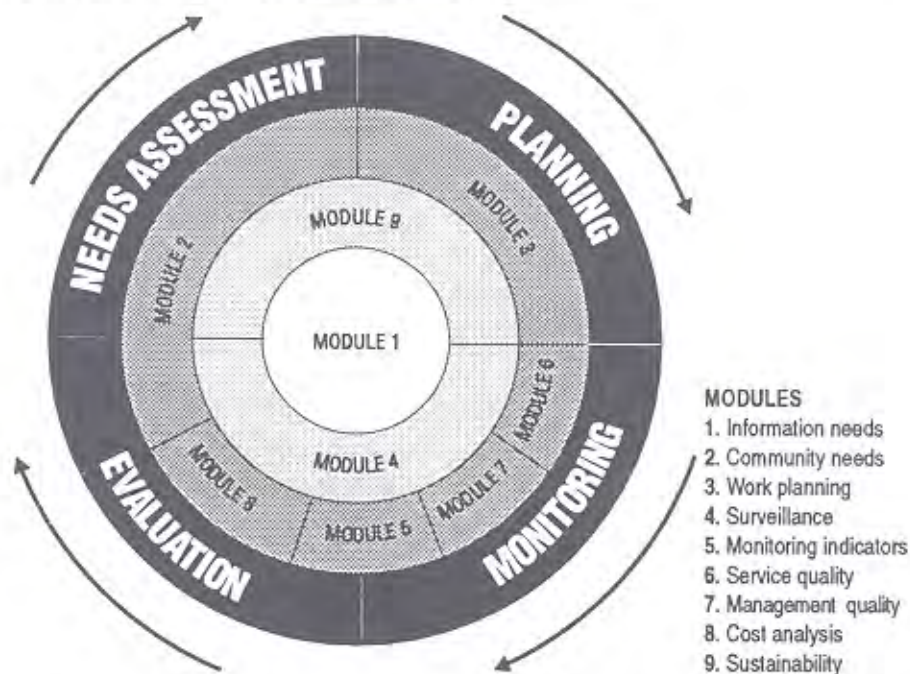
9. Sustainability analysis.

Guidelines and tools that managers can use to develop and analyse alternative strategies for sustaining health improvement, service coverage, and the PHC services and resources needed to do so.



These modules focus on information that is essential in the traditional management cycle of planning-doing-evaluating. The relationship between the modules and this cycle is illustrated below. Module 1 helps to identify information needs within the entire cycle. Module 2 produces information for needs assessments and evaluation. Module 3 is used in planning. Modules 4 and 5 are used in monitoring and evaluation. Modules 6 and 7 focus on monitoring. Module 8 is useful in evaluation. Module 9 is used in both needs assessments and planning.

PHC MAP modules and the planning - evaluation cycle



It is important to note that the modules focus on selective information needs. They complement information that most managers already have or routinely produce, such as annual plans, routine financial reports, and formal evaluations.



The entire series can be installed to strengthen overall planning and monitoring. But each module can also be used independently to deal with particular information needs as they arise.

Several manager's guides supplement these modules. These are briefly described below.

PHC MAP manager's guides

Better management: 100 tips.

Short, handy hints recommended by leading managers and management experts for becoming a better manager. Topics include running meetings, planning, and getting the most out of your staff.

Problem-solving.

Helpful hints from PHC managers describing how they have solved such common problems as: how to help illiterate health workers and how to be sure there are enough supplies. It also includes guidelines and tools for problem-solving.

Computers.

An up-to-date guide on selecting computers, printers, and related equipment. It includes suggestions for selecting software and making sure it all works.

The computerised PRICOR thesaurus.

The thesaurus is a listing of key steps in the provision of each PHC service (immunization, antenatal care, etc.). It includes suggested questions, indicators, and data sources for monitoring the key steps in each process. This 400-page computerised version of the thesaurus includes menus and an index for easy access to each section.

Who are these materials for ?

The primary audience for PHC MAP is the local PHC manager. Both new and experienced managers can benefit from using the modules. The modules can be used in an ongoing programme or in setting up a new service or programme. Others who may wish to use PHC MAP modules are NGO managers, management teams, communities, outside consultants, and researchers.

Each module also has a facilitator's guide to assist trainers, teachers, consultants, and others to help managers learn how to adapt and use the materials in their own programmes. A number of training centres are



expected to incorporate PHC MAP materials into their curricula and workshops.

Health and management services

HEALTH SERVICES		MANAGEMENT SERVICES
GENERAL PHC household visits Health education	OTHER HEALTH CARE Water supply, hygiene and sanitation School health Childhood disabilities Accidents and injuries Sexually transmitted diseases HIV/AIDS Malaria Tuberculosis Treatment of minor ailments Chronic, non-communicable diseases	Planning Personnel management Training Supervision Financial management Logistics management Information management Community organisation
MATERNAL CARE Antenatal care Safe delivery Postnatal care Family planning		
CHILD CARE Breast feeding Growth monitoring Nutrition education Immunization Acute respiratory infection Diarrhoeal disease control Oral rehydration therapy		

The modules contain guidelines and tools for collecting information on each of the principal PHC and management support services. For example, Module 2, *Assessing community health needs and coverage*, includes a sample questionnaire for each PHC service. Module 6, *Assessing the quality of service*, contains discussion guidelines and checklists for assessing the quality of those services. Module 9, *Sustainability analysis*, includes lists of factors that affect sustainability, and "What-if analysis" tables to enable you to examine the effects of various strategies on sustainability.

How should I begin?

Glance through the materials to get an idea of what they contain. Then, you should begin with Module 1: *Assessing information needs*. This module will help you get a picture of how the modules and other materials fit together. It will help you to choose the modules that are most appropriate for your situation.

Module 1 can be done at your desk or in a small group session. Experience in field tests has shown that it helps to involve your management team and community representatives in the MAP process.



Someone who has a background in MIS, programme evaluation, or applied research can act as a facilitator and lead a workshop on MAP and Module 1. The Facilitator's guide explains what to do. Allow 4–6 hours for the introduction to PHC MAP and completion of Module 1, depending on the size of the group. There is also a computer program on Hyperpad that you can use. This program will guide you through the steps in Module 1.

When you have completed Module 1 you should have a pretty good understanding of PHC MAP. You will also know your priority management information needs, which modules will be most useful to you, and what you need to do next.

How to use the computer programs

There are several computer diskettes that come with this series. The labels describe what each diskette includes. There is a "README" file on each diskette that provides instructions for using the files on that diskette. The User's guides also describe how to use most of these programs.

The Hyperpad files need to be installed on your computer before they can be used. Open the README file for the installation instructions. The PRICOR thesaurus also has a README file that describes how to use the thesaurus.

You can view the README file on your computer screen or print it out. To view it, insert the diskette in one of your drives (say A), and then type **type A:readme | more**, and press <Enter>. Press the <pause> key to stop and start scrolling the file. To print a copy, insert the diskette and type **print A:readme**, and press <Enter>.



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A social worker examines a boy's glasses in northern Portugal
Photo by K. Hinckley for AKF



Introduction

Purpose

This module will help managers identify information needs, set priorities, and determine which PHC MAP module(s) will be most useful to them. Worksheet A at the end of the module can be pulled out and used to help you keep track of your information needs.

What you need to complete this module

Although it is not essential, it would help to know your programme's objectives, target groups, the current coverage figures for your major health services, and the indicators that are currently used by your programme. You should also read the overview of PHC MAP first, if you have not already done so.

Content

This guide asks 10 questions about important information that most PHC managers need for planning and monitoring their programmes. If you have adequate information, you may not need the modules. But if you have important gaps, or you need to have additional information, the guide will help you determine what you need. It will also suggest which modules in the MAP series can help you gather and process that information - simply and rapidly.

Procedures

- If you want to go through this module quickly, go to **Level 1: Quick start** and just review the questions and descriptions of the modules. That may be all you need to



determine which module(s) to start with. The first 6 questions deal with PHC services, the next 4 with management.

- If you prefer to go through this module more systematically, skip to the next section, **Level 2: Describing your PHC system**. That will probably take a few hours, depending on the size of your programme and your familiarity with the kind of information currently gathered.
- **Level 3: Detailed questions** asks you to examine various information needs in detail and to decide which modules will be most useful to you.

**Facilitators
can help**

You can go through the module on your own. However, experience has shown that it is best to get your management team and community representatives involved in the MAP process. They usually have a lot to contribute, and it is useful to have different perspectives represented at the beginning. Involving them will also ensure that they understand and support the decisions that will be made.

A facilitator can be helpful if you want to hold a workshop on Module 1. The Facilitator's guide provides instructions for running a workshop and includes sample transparencies and handouts. Allow 4-6 hours for completion of the overview of PHC MAP and Module 1, depending on the size of the group. This module, like all the others, can be adapted to fit your situation, and you are encouraged to do so.

There is also a computerised version of this module on Hyperpad, which is included on the accompanying diskettes. You enter your choices right on worksheets on the computer screen. When finished, you can print out a summary of your information audit.



The PHC MAP framework

The purpose of Module 1 is to help managers identify information needs, set priorities, and determine which PHC MAP modules are likely to be most useful to them. Managers will need to conduct an information audit, which is a systematic assessment of information needs compared with information currently collected. The audit can help you to identify information gaps (and the MAP modules that can help you fill them). And it also can help you identify information that is no longer needed (which you probably shouldn't collect anymore).

These modules focus on essential information that is needed in the traditional management cycle of planning-doing-evaluating. As mentioned in the overview, each module is related to one or more parts of that cycle. That relationship is shown in the matrix below.

	Needs assessment	Planning	Monitoring	Evaluation
Module 1 : Information needs	X	X	X	X
Module 2 : Community needs	X			X
Module 3 : Work planning		X	X	
Module 4 : Surveillance				X
Module 5 : Monitoring indicators			X	X
Module 6 : Service quality			X	
Module 7 : Management quality			X	
Module 8 : Cost analysis				X
Module 9 : Sustainability	X	X		

The modules do not attempt to provide all information that managers use, nor do they constitute a complete management system or even a complete management information system. They do not teach managers how to plan, for example. Planning and other basic management functions are adequately covered in widely available textbooks and manuals. The PHC MAP modules are designed to help local PHC managers gather and analyse selective information that experience has shown they often need but do not have. Thus, in some cases the modules will complement information already collected. In others they may help



managers fill important gaps.

The entire series of modules can be installed to strengthen overall planning and monitoring. But each module can also be used independently to deal with a particular information need as it arises.

In many cases the information produced by one module complements another. For example, cost analysis data from Module 8 can be a useful input to sustainability analysis in Module 9. If data from monitoring (Module 5) identify a problem in PHC services, then Module 6 can be used to examine the quality of services more carefully and to pinpoint the problem so that it can be resolved.

The next section provides a brief overview of the systems framework used in the PHC MAP modules. It is important to understand this framework so that you can determine which modules you might need. The overview is followed by 10 questions summarised in Level 1: Quick start. Level 2 helps you describe your programme in systems terms and helps you determine the information needed for each PHC and management service. Level 3 helps you look at each of the 10 questions in more detail, so that you can do a more comprehensive assessment. When you have completed this module, you should have a good idea of your management information needs and the modules that can help you meet those needs.

Systems framework

The PHC MAP framework is based on a "systems" model. Different types of information are collected through each module. If you are not familiar with systems terminology, then the following section may help you understand how the MAP framework classifies information. If you are familiar with systems terminology, skip to the next section.

We realise that you might be used to slightly different terms. Some people have been taught that objectives are short-term goals. We distinguish between goals and objectives because it allows more precision in planning. In this series, an objective is defined as a planned **output** or **effect**. A goal is a planned **impact**.



Terminology

Some key terms you need to know

INDICATORS	Indirect measures of all of the following
INPUTS	Resources: personnel, equipment, information, money
PROCESSES	Activities, tasks
OUTCOMES	All programmatic changes, outputs, effects, and impacts
	Outputs Products and services provided
	Effects Changes in knowledge, attitudes, behaviour/practice
	Impacts Changes in health, fertility, and other status
OBJECTIVES	Planned outputs and/or effects
GOALS	Planned impacts

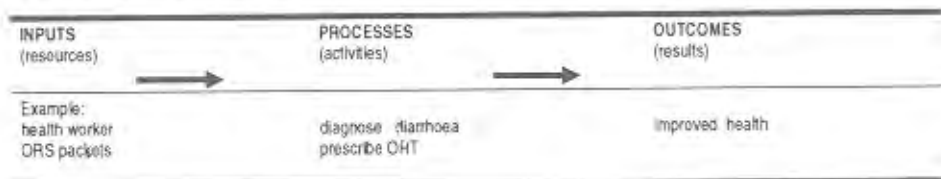
See the Glossary for more detailed definitions

Some people have been taught that outputs and outcomes are the same. We use "outcome" to include any programmatic result. Thus, we distinguish between three types of outcomes: **outputs** (the immediate products and services produced by the programme), **effects** (the knowledge, attitude, and behaviour/practice changes that result from the outputs) and **impacts** (changes in health or fertility status due to the effects). Again, we make these distinctions because it allows us to be more precise in selecting indicators for planning and evaluation.

Any programme, including PHC programmes, can be seen as consisting of inputs, processes, and outcomes, as shown in Figure 1. In the PHC MAP series, these, and related terms, have specific meanings and relationships.

Inputs are resources (staff, money, supplies, trucks, etc.) that are invested in a programme and **processed** in various ways (counselling, diagnosis, referral, etc.) to produce **out-**

Figure 1: A simple system-oral rehydration therapy

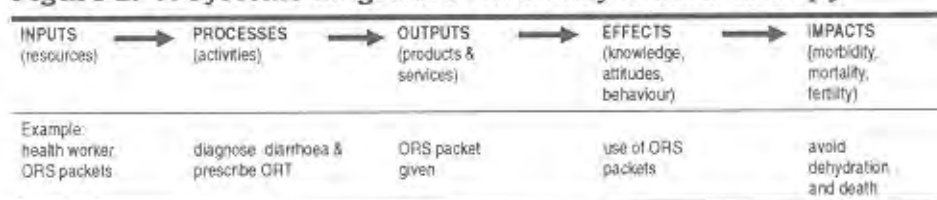


comes (the results of the programme on knowledge, behaviour, health, etc.).

This simple model can be expanded, as shown in Figure 2, to distinguish between three different types of outcomes. The immediate results are called **outputs**. These are the **products** and **services** produced by the programme. Examples are growth monitoring cards distributed (a product), children weighed and pregnant women contacted (both services).

These outputs are expected to have **effects** on client **knowledge, attitudes, skills**, and especially, **behaviour**. A mother, for example, is supposed to gain knowledge about the value of using ORT, gain the skills to mix the solution properly, become motivated to use the solution when her child has diarrhoea, and then actually use it at the appropriate time.

Figure 2: A systems diagram of oral rehydration therapy



Ultimately, this should produce an **impact** on the health, fertility, socio-economic, or other status of the target population. Children who receive ORT, for example, should avoid becoming dehydrated and recover normally from diarrhoea.

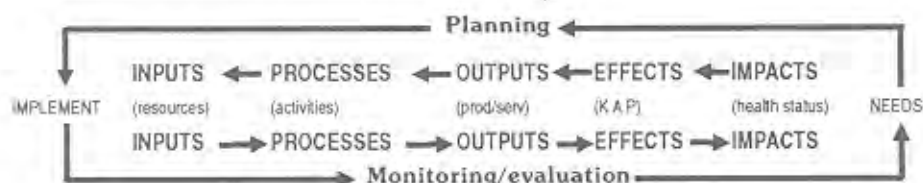
There is a logical relationship in this chain of events that is the key ingredient in both planning and evaluation. Obviously, if the inputs aren't adequate, the outputs won't be produced. And if outputs aren't produced, we cannot expect any effects. And without effects, we cannot expect to have any impact on health. This logical linkage is called an **"IF - THEN"** relationship.

- **IF** the inputs are provided as planned, **THEN** the processes will be achieved.
- **IF** the processes are conducted as planned, **THEN** the outputs will be achieved.



- **IF** the outputs are produced as planned, **THEN** the effects will be achieved.
- **IF** the effects are achieved as planned, **THEN** the impacts will be achieved.
- **IF** the impacts are achieved as planned, **THEN** the health needs will be met.

Figure 3: The systems framework and the planning-evaluation cycle



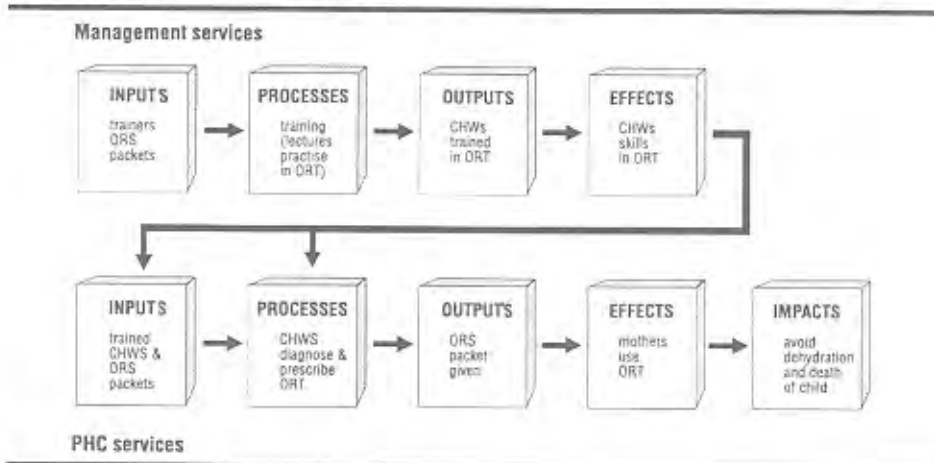
This logical link between what goes into a PHC service at the beginning and what comes out at the end, is an extremely important management concept. Many managers only look at what goes into a programme. Some also look at a few indicators of what comes out. If something goes wrong, they do not know why. PHC MAP helps managers gather information at key points in this logical process so that they can identify where something goes wrong, and then take action. The logic works backwards, also.

- **IF** these needs are to be met, **THEN** these impacts will have to be achieved.
- **IF** these impacts are to be achieved, **THEN** these effects will have to be achieved.
- **IF** these effects are to be achieved, **THEN** these outputs will have to be achieved.
- **IF** these outputs are to be achieved, **THEN** these processes will have to be achieved.
- **IF** these processes are to be achieved, **THEN** these inputs will be needed.



Thus, the systems relationships can be used in two ways. First in planning, by working backwards from health needs to identify needed impacts, effects, outputs, processes, and finally, inputs. Second, in monitoring and evaluation, by working forward to make sure that what was planned was actually carried out, that inputs were processed as planned to produce outputs, which led to effects then impacts, and that this met the health needs.

Figure 4: A system diagram of management and services relationships



When viewed this way, the systems framework is simply a variation of the traditional planning and evaluation cycle. But its advantage is that it can be used to identify logical links between what is needed and what should be invested in a programme; and between what is invested and what is actually achieved. As we shall see, that provides a structure for selecting indicators for planning and monitoring/evaluation.

Management services support the PHC services. Each management activity (training, supervision, etc.) can be seen as a subsystem that is designed to improve the PHC service system. That is, there are **inputs** to training (trainers, training materials, classrooms, etc.), which are processed to



produce **outputs** (lectures given, materials distributed, people trained, etc.). Those outputs are supposed to have **effects** on the trainees. They are to increase their knowledge, skills, and/or motivation.

All of these management services are designed as systems, just like the PHC services are. But the impact of management is indirect. Management outcomes are inputs to the service systems. The end product of a training programme for CHWs should be a better qualified CHW, who then provides better service to the target population. Figure 4 illustrates this relationship.

Management Outcomes

Relationship between framework and modules

The PHC MAP framework breaks all PHC information into five categories: **inputs, processes, outputs, effects,** and **impacts**, these categories help to identify information needs. Figure 5 shows which modules produce which types of data.

Figure 5: Categories of information produced by MAP modules

INPUTS (resources)	PROCESSES (activities)	OUTPUTS (products/services)	EFFECTS (K A P)	IMPACTS (health status)
3 Work planning	3 Work planning	3 Work planning	2 Community needs 3 Work planning	2 Community needs 4 Surveillance
5 Monitoring 6 Service quality 7 Management quality 8 Cost analysis 9 Sustainability	5 Monitoring 6 Service quality 7 Management quality 8 Cost analysis 9 Sustainability	5 Monitoring 6 Service quality 7 Management quality 9 Sustainability	9 Sustainability	

Bold lettering indicates the primary type of data collected for each module.

The MAP modules can help you identify and collect information you need. This should help you do a better job of **planning** because you will know what the health and service needs are. It should help you **monitor** progress better, because if something does go wrong, you will have an idea of where it happened in the system and be able to get additional information about the cause so that you can correct the problem.



Module 2 is especially useful in helping you collect **effect** and **impact** data. Those data tell you what your coverage levels and health status are. This information can help you in two ways.

First, it tells you what the **need** is for health care, which will help you do a better job of setting goals and objectives. Second, it tells you how **effective** your programme has been in achieving coverage and improving health status, which helps you do a better job of evaluating the effects and impacts of your programme.

Module 3 will help you get specific **output** information to determine who is and is not receiving needed PHC services and products. That will help you set service priorities among your target population and monitor health worker performance in providing those services. The module also produces input, process, and effect data that will help you improve work planning and performance assessments.

Module 4 will help you get specific **impact** data on the incidence, trends, and outbreaks of specific diseases so that you can take action quickly to deal with these threats to health status. The module will also help you identify causes of diseases and death so that you can adapt your PHC interventions accordingly.

Module 5 will help you identify and select a few simple indicators of **inputs, outputs, and effects** for each of your PHC and management services. This will be especially useful for monitoring your programme on a regular, periodic, or short-term basis.

Modules 6 and 7 emphasise **process** data, which will enable your supervisors to assess the quality of service. Module 6 addresses PHC services and Module 7 deals with management services. In addition to process data, these modules also help you gather selective information on key inputs to and outputs of your services.

Modules 8 and 9 emphasise **inputs** summarised as costs and revenues. Both will help you examine and explain how resources are used to provide and support services.



Module 8 helps you analyse recent revenues and expenditures. Module 9 helps you look at future options for continuing your programme.

Defining your health system

Setting boundaries

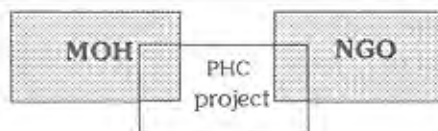
PHC programmes are only a part of the larger health system. Health products and services are typically provided by government and non-governmental organisations, private providers, pharmacies, schools, and others. Before you begin, you should define your PHC system. For example, if your organisation collaborates with the Ministry of Health (MOH) to provide immunization services, should your "system" include the MOH services?

**Information
boundaries**

Most managers intuitively draw "boundaries" around the parts of the system that they control or those for which they have responsibility. This is how they define their information needs. They need information on the services and other activities that fall inside those boundaries.

However, in some cases they may need to have information about some of the activities of other agencies that affect their programmes. Examples would be vaccines provided by the MOH, the outcome of referrals to a neighbouring hospital, and distribution of Vitamin A by an NGO in their catchment areas. If your programme falls into this category, then you should draw your boundaries so that they include the parts of these other systems that you depend on. You will want to collect some information on these activities. But don't collect too much. An important rule of thumb is: collect only information that you need for your own planning and monitoring.

Figure 6 : Setting boundaries for information needs





Two village Health Development Committee members bridge the generation gap to ensure community co-operation for health in Kenya
Photo by Jean-Luc Ray for AKF



Level 1: Quick start

Do you have enough information for planning and monitoring your PHC services and your management services? Answer the questions in the following boxes and read the descriptions of the modules. That may be all you need to do to decide which module(s) you would find most useful.

MODULE 1 ASSESSMENT QUESTIONS : PHC SERVICES

Do you have enough information about the health status of your target groups?

Do you have enough information about the coverage of target groups by the appropriate PHC service?

If you need more information, go to Module 2.

Module 2. Assessing community health needs and coverage.

This module provides PHC managers with simple tools to gather required data on community health needs for planning programme strategies and resource use. The managers can use the same instruments later to assess programme effects on health knowledge, behaviour and coverage, as well as programme impact on morbidity and mortality.

Do you have enough information about where your target groups live, who needs the most attention, and the effectiveness of your health workers in reaching those people?

If not, use Module 3.



Module 3. Planning and assessing health worker activities. *A module that supervisors and other managers can use to help field workers and clinic staff plan their work better. It shows how to identify individuals in need of services, set realistic targets, assess individual performance, and take corrective action, if warranted.*

Do you have enough information about the incidence of diseases?
 Do you have enough information about the causes of disease outbreaks and deaths?
 If not, use Module 4.

Module 4. Surveillance of morbidity and mortality. *The module describes the basic indicators of morbidity and mortality to be included in a PHC surveillance system. It discusses how to set up a surveillance system, monitor the incidence and other rates of diseases, how to identify causes of mortality and morbidity, and how to use that information to improve programme planning and implementation.*

Do you have the appropriate outcome and activity indicators to monitor your health services?
 If not, use the first part of Module 5.

Module 5. Monitoring and evaluating programmes. *The first part of this module contains lists of indicators and guidelines that managers can use to monitor PHC services for short periods. Managers can also use them to construct a project-specific "mini-MIS."*

Do you know enough about the quality of your health services?
 If not, see Module 6.

Module 6. Assessing the quality of service. *Simple, but comprehensive, discussion guides and checklists of essential service resources and processes. Supervisors can use these to assess the quality of care provided and to set priorities for improving service delivery.*

Modules 1-6 (above) help you assess information needs for planning and monitoring **PHC services**. Modules 5, 7, 8 and 9 deal with information you need to plan and monitor **management services**.



MODULE 1 ASSESSMENT QUESTIONS: PHC MANAGEMENT SERVICES

Do you have the appropriate indicators to monitor your management services?

If not, try the second part of Module 5.

Module 5. Monitoring and evaluating programmes. *The second part of this module consists of lists of indicators and guidelines that managers can use to monitor PHC management services. These can also be used as part of a project-specific "mini-MIS".*

Do you know enough about the quality of your management services?

If not, use Module 7.

Module 7. Assessing the quality of management. *Discussion guides and checklists for assessing PHC management services (planning, training, supervision, etc.).*

Do you have enough information about the cost of your programme and its services?

If you need more information, try Module 8.

Module 8. Cost analysis. *This module will help PHC managers set up simple systems to monitor costs themselves. They can also make projections about future revenues and expenses.*

Do you have adequate information to determine how to sustain your PHC programme in the future?

If not, use Module 9.

Module 9. Sustainability analysis. *Guidelines and tools that managers can use to develop and analyse alternative strategies for sustaining health improvement, service coverage, and the PHC services, organisation and resources needed to do so.*





Keeping a check on the distribution of medicine, as here, in a Mali village, could be speeded up and simplified by storing information on compact disks.

Photo by P. Almsey for WHO



Level 2: Describing your PHC system and identifying key indicators

Level 2 helps you define your programme in system terms. This will help you identify the key pieces of information that you will need (indicators) for planning and monitoring. The easiest way to do this is to summarise your current services and the indicators that you believe you need for each one. As you go through the module, you will determine whether these are adequate for your purposes, whether you can stop collecting some, and whether you need to add others. Use Worksheet A to summarise your key indicators by target group and service. Don't worry if you can't fill them all out right away. As you go through the various modules, you may decide to add to or delete from this list. Worksheet A can be a handy summary of your management information needs.

Step 1: List the project's principal health and management services

Your programme probably provides 5-10 PHC services (e.g., ANC, ORT, child immunization), and you probably have 3-5 management services that are important (e.g., supervision, training, information system). List them on a piece of paper. Use the list in the overview at the beginning of this module as a checklist. An example of a completed list is shown in the box on the next page. Use your own terms and groupings of services. If possible, list the services in priority order with the most important service listed first.



Health services

1. Maternal care (ANC, PNC)
2. Family planning
3. Breastfeeding, growth monitoring, nutrition education
4. Child immunization
5. Diarrhoeal disease control/ORT
6. Vitamin A distribution (for night blindness)

Management services

1. Training (Staff, CHWs, TBAs)
 2. Supervision
 3. Accounting (financial management)
 4. Logistics management (supplies, equipment)
 5. MIS (information management)
-

Step 2: Define the principal inputs, processes and outcomes of these services

Start with the highest priority service and identify the **principal** inputs, processes, outputs, effects and impacts of each service. These can be abbreviated as indicators (e.g., "CHW," "vaccines" for inputs. See Worksheet A, p. 20, for an example). You can start from either end. That is, list the desired impacts and work backwards, or start with inputs and work forwards. **The important thing is to identify the most significant indicators and to make sure that they are logically linked, so that you can assess whether or not you have adequate information on each of your services.** Although the following example is limited to two indicators per category, you can list as many indicators as you wish. Consult Module 5 for examples of important indicators for the various PHC and management services.

Remember that **inputs** are resources (personnel, money, materials, information); **processes** are activities or tasks that staff carry out; **outputs** are the results of those activities (products and services provided); and **effects** are the improvements gained in knowledge, skills, attitudes, and behaviour/practice. The ultimate result is the **impact** on health status (mortality, morbidity, disability, fertility).



This model applies to both PHC and management services, except that the management services usually stop at effects. They are not usually intended to have a direct impact on health. Instead, they are intended to improve the PHC service inputs and processes and have an effect on the knowledge, skills, and performance of staff.

Repeat this step for each of the first three or four services on the priority list. If this exercise is being conducted by a team, it may be useful to assign small groups to each of the priority services so that several services can be done at once. A blank worksheet is included in the appendices for your use.

**Figure 7: PHC services
breast feeding, growth monitoring, nutrition education**

INPUTS (resources)	→ PROCESSES (activities)	→ OUTPUTS (products & services)	→ EFFECTS (knowledge, attitudes, behaviour/ practice)	→ IMPACTS (morbidity, mortality, fertility)
CHWs GM cards	weighing counselling	child weighed mother counselled	mother understands GM and nutrition mother feeds better	weight gain malnutrition rate drops

Step 3: Identify your information needs

Scan through the worksheet and for each service listed identify the most useful indicators for planning and monitoring and determine whether your current information system provides adequate data for these indicators. Mark those indicators that are important, for which data are missing or inadequate.

There is a separate worksheet B that you can use to summarise your information needs. An example follows worksheet A, and a blank form is included in appendix B. The information needed is summarised in the sample worksheet.

You may be able to complete your assessment from this chart. The 10 questions that follow in the next section (Level 3) can help you to examine each information category in more detail.



WORKSHEET A: DEFINING SERVICE INDICATORS Instructions: 1) List each priority PHC or management service; 2) Identify key indicators you need for planning and/or monitoring; 3) Identify those that are already available (mark with an **x**); 4) Identify the low, medium and high priority items (e.g., with *, **, and ***); 5) Revise and update this list as you proceed through Module 1 and other modules.

TARGET GROUP	INPUTS (resources)	PROCESSES (activities)	OUTPUTS (products and services)	EFFECTS (knowledge, attitudes, behaviour/ practice)	IMPACTS (morbidity, mortality, fertility)
Children < 2	SERVICE: BF, GM, Nut. Ed. CHWs x	weighing	child weighed x	mother understands GM & nutrition**	weight gain
CHWs	GM Cards x	counselling**	mother counselled x	mother feeds better	malnutrition drop*
	SERVICE: Supervision supervisors x	assessment	supervisory contacts x	CHW skill gain**	not applicable
	Supervisor guidelines x	counselling*	supervisory reports x	productivity gain	not applicable
Women 15-49	SERVICE: Family Planning CHWs x	home visiting	women contacted x	new acceptors x	TFR decline*
	contraceptives x	counselling**	contraceptives distributed x	prevalence of use	birth interval increase
Community Leaders	SERVICE: Community Organ. community organizer x	visiting	communities visited x	active volunteers*	not applicable
	community leaders x*	educating*	leaders trained x*		not applicable



WORKSHEET B: SUMMARISING INFORMATION NEEDS Instructions: 1) after you list each question, summarise your general information needs for each type of information under the appropriate module; 2) Identify the specific type of indicators needed (if known); 3) set priorities for each need (e.g., * for low, ** for medium, and *** for high)			
MODULE	GENERAL INFORMATION NEEDS	SPECIFIC INDICATORS	PRIORITIES
2. Community needs impact	Change in total fertility rate Change in third degree malnutrition	Total No. births to women 15-45 yrs/total women 15-45 yrs No. of cases of 3rd degree malnutrition among children <2 years/total number of children <2 years	• •
3. Work planning coverage	Mothers understand GM and nutrition	Percent of mothers who understand GM/nutrition	•
4. Surveillance morbidity mortality	Malnutrition trends of children <2 years	same as above	•
5. Indicators PHC services Management	Contacts with community leaders, active community volunteers; CHW skill gain Counselling of mothers on BF, GM, nutrition, FP	No. and % community leaders contacted/month No. of active volunteers; see module for skill gain See module for checklists	• • •
6. PHC service quality	Counselling/coaching of HW by supervisors	See module for checklists	•
7. Management services	Educating of community leaders by Community Organisers	See module for checklists	•
8. Cost analysis			
9. Sustainability			



Step 4: Summarise your information priorities

If you have assessed more than one service you will probably have a number of information needs identified on your chart. Since it will probably not be feasible to meet all of your needs at once, you will need to set priorities among them once again. Management experience has shown that the most important data needs usually occur in three areas:

1. what clients know and do (**effects**)
2. how well PHC services are provided (**outputs**), and
3. costs of services (**inputs**)

Areas of secondary importance are:

4. health status, especially the outbreak of diseases (**impacts**)
5. the quantity of products and services provided (**outputs**)
6. staff performance (**effects**) and
7. the quantity and quality of available resources, especially staff and supplies, equipment (**inputs**)

Common priorities

Your priorities may differ, of course, and they may change over time. Use Worksheet B to summarise your information needs and to identify the modules that are most likely to help you fill those needs.

If you have a large number of "priorities," you may want to use a priority-setting technique to identify the most important of your information needs. See Appendix A for some suggestions.



Level 3: Detailed questions

This section consists of 10 questions, which are designed to help you determine the information you need. The first set of two questions deals with information about the project's target groups, their health status, and coverage - important information for assessing needs and evaluating project effects and impact. The second set of four questions helps you to identify information needed for planning PHC service strategies and monitoring PHC services. The third set of four questions addresses management issues, including information needed to monitor management activities and costs, and assess future project sustainability.

Questions for assessing information needs and selecting appropriate PHC MAP modules

PHC GOALS, TARGET GROUPS, SERVICES, COVERAGE AND IMPACT

- Q 1** : Do you have enough information about the **health status** of your target groups? (2)
- Q 2** : Do you have enough information about the **coverage** of each PHC service? (2)

WORK PLANNING, MONITORING, QUALITY ASSESSMENT

- Q 3** : Do you have enough information **about your target groups' needs** to plan PHC activities? (3)
- Q 4** : Do you have adequate information about **changes in morbidity and mortality**? (4)
- Q 5** : Do you have adequate indicators **to monitor your PHC services**? (5)
- Q 6** : Do you know enough about the **quality of your PHC services** ? (6)

continued next page



PHC MANAGEMENT, COSTS AND SUSTAINABILITY

- Q 7 :** Do you have adequate indicators to **monitor your management** services? (5)
- Q 8 :** Do you know enough about the **quality of your management** services? (7)
- Q 9 :** Do you have enough information about the **costs of your programme and its services**? (8)
- Q 10 :** Do you have adequate information to determine how to **sustain your PHC programme in the future**? (9)

Note: The numbers in parentheses refer to the relevant module.

PHC programme goals, target groups, services, and coverage

The purpose of the first question is to determine whether you are collecting adequate information about the **health status** of your target groups (impact indicators). You need this for needs assessment and evaluation. If you do not have adequate data on health status, you may find that Module 2 can help you to get that information.

QUESTION 1. DO YOU HAVE ENOUGH INFORMATION ABOUT THE HEALTH STATUS OF YOUR TARGET GROUPS?

Whether you are starting a new programme or continuing an ongoing one, you need this information for two important reasons. First, to assess needs. What types of health problems are there, and what are the priorities that need to be addressed? Second, you need this information to determine the impact that your programme is having on health. Is health improving? Does more need to be done? Is it time to switch priorities?

First, you need to know what is the current health status of your target groups so that you can set reasonable goals for the programme. You need clear goals to select the kinds of PHC services to provide. By "goal" we mean the impact your programme hopes to have on health. PHC goals are usually stated as intended improvements in health status



(mortality, morbidity, disability, fertility). Goals also identify specific groups of people (often called "target groups") whose health the programme is trying to improve (e.g., children 12-23 months of age; married women 15-45 years). Goals are based on an assessment of health needs. For example, if third degree malnutrition is high among young children, a logical goal would be to reduce the prevalence of severe malnutrition.

The second reason you need information about health status is for evaluation: to assess the impact your programme is having on health. If you don't know the impact your programme is having, you may be providing services that aren't necessary or are a waste of time and money. Or they may be very useful. The point is, you won't know unless you have the information. Without it you won't be able to do a good job of needs assessment or of evaluation.

WHY WE NEED GOALS:

"If you don't know where you are going, any road will get you there."

WHY WE NEED TO EVALUATE PROGRESS:

*"If you don't know where you are, you may already be there.
Or you may not be."*

Many PHC programmes already have clear goals, and quite a few have current information on local disease patterns, causes of death and fertility patterns. If you do, you may already have enough information on the health status of your target groups

To do a quick assessment of your need for information about health status, summarise your programme's major goals and target groups and list the indicators that you use to measure them. Or, if you prefer, write out goal statements. Ideally, goal statements should contain four items: 1) the type of improvement desired, 2) the target group, 3) the amount of change that should occur, and 4) the date for achieving the goals. Examples of goal statements (and their indicators) are shown on the next page.

Most PHC programmes have only 2-3 goals, although they may provide several PHC services to achieve each goal. For example, many PHC programmes try to reduce infant



GOALS	INDICATORS
<ul style="list-style-type: none"> • Reduce neonatal mortality among urban slum dwellers to a rate of 65 per 1,000 live births by the end of 1994 (Mortality goal) 	<ul style="list-style-type: none"> • Indicator: No. of deaths of children under 1 month of age/1,000 live births
<ul style="list-style-type: none"> • Decrease the prevalence of 3rd degree malnutrition among children under age 3 by 30 percent by September, 1995 (Morbidity goal) 	<ul style="list-style-type: none"> • Indicator: No. of cases of 3rd degree malnutrition among children <3 yrs/total No. children <3 years
<ul style="list-style-type: none"> • Decrease the incidence of polio among children under age 5 to 0 (zero) by the year 2000 (Disability goal) 	<ul style="list-style-type: none"> • Indicator: No. of new cases of polio among children <5 years
<ul style="list-style-type: none"> • Reduce the total fertility rate of women in the programme area to 4.5 by the end of 1996 (Fertility goal) 	<ul style="list-style-type: none"> • Indicator: Total births to women 15-45 years/total women 15-45 years

mortality through a combination of immunization, sanitation, nutrition, and ORT services. For now, just list your programme's major goals. The services will be added in Step 2.

You should have at least one indicator for each major goal. If you are using Worksheet A, list these indicators under the impact column and check those for which you already have data.

You do not need to assess health status regularly. Every 3-5 years is usually enough, since health status does not change rapidly. Also, assessments of health status require fairly large samples, especially for such rare events as maternal deaths.

If you do not have enough information about the health status of your target groups, take a look at **Module 2**. It can help you collect information that you can use to make reasonable estimates at reasonable costs. Use Worksheet B to summarise the type of impact information you need to collect.



TARGET GROUPS	HEALTH GOALS	INDICATORS
Children <2 yrs	Reduce mortality	<ul style="list-style-type: none"> •No. of deaths of children <1 yr/1,000 live births •No. of deaths of children <2 yrs/total No. children <2 yrs
	Reduce morbidity	<ul style="list-style-type: none"> •Percent of children <2 yrs with third degree malnutrition
	Reduce disability	<ul style="list-style-type: none"> •No. of cases of immunizable-preventable disabilities/1,000 children <2 yrs
	Reduce fertility	<ul style="list-style-type: none"> •Total fertility rate
Married women 15-49 yrs	Reduce mortality	<ul style="list-style-type: none"> •No of maternal deaths/10,000 pregnancies
	Reduce fertility	<ul style="list-style-type: none"> •Total fertility rate

QUESTION 2. DO YOU HAVE ENOUGH INFORMATION ABOUT THE COVERAGE OF EACH PHC SERVICE?

PHC programmes attempt to reach their goals by providing one or more health services to their target groups. Those services are expected to have positive **effects** on the target groups. These effects are generally of three types: 1) improved **knowledge** (e.g., about the benefits of ORT); 2) improved **skills** (e.g., how to administer ORT); and 3) improved **behaviour/practice** (e.g., giving ORT to a child who has diarrhoea). These effects must occur if the goals are to be achieved. That is why it is not only important to define them, but to measure them as well.

The purpose of Step 2 is to identify those services and to determine whether you have adequate information about the **need for** and the **effects of** each. The most important piece of information needed is "**coverage**" data. Coverage is defined as **the proportion of the target group that has received a service or is protected from a disease or health problem**. Some examples are shown on the following page.



Examples of PHC coverage indicators

Service / Condition	Coverage indicator
Antenatal care	% pregnant women delivering who had made 3 or more ANC visits
Tetanus toxoid immunization	% women 15-44 yrs who received 2 doses of Tetanus toxoid vaccination
Safe delivery	% deliveries assisted by trained attendant
Family planning	% married women (or couples) practising family planning
Breast feeding	% children 18-23 mos breastfed until they were age 18 months
Growth monitoring	% children < 2 yrs weighed in the last 3 months
Child immunization	% children 12-23 mos. fully immunized
Acute respiratory infection	% ARI cases treated
Diarrhoeal disease control	no. children < 5 yrs with diarrhoea/1,000 children <5 yrs
Oral rehydration therapy	% children <5 yrs treated with ORT for the last episode of diarrhoea
Water, sanitation, hygiene	% households with safe water/latrine
Vitamin A	% children 6-12 mos. received Vit A
Tuberculosis	% cases followed to cure
Malaria	% identified cases treated
Sexually transmitted diseases/HIV	% target group infected who are treated
Disability	% children < 5 yrs disabled
Health education at home	% households (with target groups) receiving health education during health worker visit in the past year
Health education at school	% schools receiving or participating in health education activities
Drug supply	% communities with adequate supplies
Accidents & injuries	no. accidents + injuries/1,000 population
Chronic, non-communicable diseases	% target group with hypertension, chronic heart disease, anaemia, diabetes

For each of the target groups you identified, fill in the following information on a piece of paper. Use the example that follows as a guide.



TARGET GROUP	HEALTH SERVICES	COVERAGE INDICATORS
Children < 2, < 5 yrs	Child immunization Growth monitoring Oral rehydration therapy Nutrition education	% < 24 mos. fully immunized % < 5 yrs weighed % using ORT last episode % < 2 yrs low weight-for-age
Married Women 15-49 yrs	Antenatal care & TT Family planning	% pregnant women enrolled in ANC No. of new acceptors

If there is a target group or a health service that you think should be added to your programme, include that also, even if you do not have any information about it.

Again, you should have at least one coverage indicator for each PHC service. If you are using Worksheet A, copy your coverage indicators to the Effects column and check those for which you have already collected data. If you need more data on coverage, consult Module 2.

Module 2 includes lists of important coverage, KAP, and health impact indicators for each PHC service. Module 5 also includes extensive lists of indicators that you may want to consult. It will show you how to collect this information about each of your target groups through rapid community surveys. That information will be useful to you in two ways: to assess **health needs** (so you can do better needs assessments), and to assess **programme coverage** (so that you can do evaluation).

Module 2 includes sample questionnaires for each of the PHC health services. It also includes guidelines and tools for designing simple surveys, drawing cluster samples, processing and analysing data, and interpreting results. An excerpt from the questionnaire on Antenatal Care is shown in Exhibit 1.

As noted previously, assessments of health status will usually require much larger samples than coverage surveys. You may want to keep this in mind, and perhaps do an impact assessment every 3-5 years and a coverage survey every 1-2 years. Use Worksheet B to summarise the type of coverage information you need to collect with Module 2.



Exhibit 1: Excerpt of questionnaire in Module 2: Assessing health needs and coverage

Excerpt from
RAPID SURVEY QUESTIONNAIRE:
 Antenatal care, safe delivery, and postnatal care

Complete for all women currently living in the household who have had a pregnancy outcome during the past 24 months. The outcome may be a live birth, stillbirth, or abortion. If the woman has had more than one pregnancy, ask about the most recent pregnancy outcome.

IDENTIFICATION

1. Study no _____ 2. Province no _____ 3. Cluster no _____
 4. Interviewer no _____ 5. Respondent no _____ 6. Date of interview / /
 7. Respondent age _____ 8. Respondent sex _____

NAME OF RESPONDENT _____

9. How many live births have you had so far? Number of live births: _____
 (99) DK/NR
10. Did you receive antenatal care during your last pregnancy?
 _____ (1) Yes _____ (0) No, go to Q14 _____ (9) DK/NR, go to Q14
11. How many times did you get antenatal care? _____ times
 (If DK/NR, enter 99)
12. How many months had you been pregnant before you got antenatal care?
 _____ (1) 3 mo. (first trimester)
 _____ (2) 4-6 mo. (second trimester)
 _____ (3) 7-9 mo. (third trimester)
 _____ (9) DK/NR

(Questionnaire continues: total of 22 items)



Work planning, surveillance, monitoring, quality assessment

The purpose of the next four questions is to determine if you are collecting adequate information about the performance of your health workers and your services. If you do not have enough, or the right kind of monitoring information to make sure everything is going as planned, then Modules 3, 4, 5, and 6 may be useful to you.

QUESTION 3. DO YOU HAVE ENOUGH INFORMATION ABOUT YOUR TARGET GROUPS' NEEDS TO PLAN PHC ACTIVITIES?

Do you have enough information about where your target groups live, who needs the most attention, how best to deliver it, and the effectiveness of your health workers in reaching those people?

Module 3 will help you get specific information on each individual in each target group. This will help you set priorities for services. The module also helps your health workers develop individual work plans to make sure that they provide services to those who need them most. This is a key piece of information that you need. It will help you to increase coverage and to make sure that high-risk cases are given priority. And that should lead to improved health among your target groups. Module 3 also shows you how to improve the performance of your health workers.

A summary of the contents of Module 3 is shown below to give you an idea of what it offers. You can use this module to help you with individual PHC services, although it is written with a comprehensive PHC programme in mind.

Module 3: Planning and assessing health worker activities

- Step 1:** Describe and map the catchment area
 - Step 2:** Identify community needs and available resources
 - Step 3:** Set priorities among health problems and identify high-risk groups
 - Step 4:** Plan PHC activities
 - Step 5:** Develop job descriptions and recruit staff
 - Step 6:** Develop individual work plans and schedules
 - Step 7:** Assess job performance
-



Module 3 contains a large number of sample forms that you can use to plan and assess your health workers' activities. These include clinic and CHW registers, worksheets for identifying high-risk mothers and children, and work plans. One of these, a simplified work plan for a CHW's household visits, is shown below.

Exhibit 2: Simplified CHW monthly work plan

Work plan for: Lekha Village: Banglapur		May No. HH: 413	
Day	Schedule	Day	Schedule
1	Holiday	16	Supervision session
2	#1-#17	17	#198-219
3	#18-36	18	#220-240
4	#37-56	19	Day off
5	Day off	20	Day off
6	Day off	21	#241-256
7	#57-76	22	#257-275
8	#77-95	23	#276-299
9	#96-114	24	#300-321
10	#115-132	25	#322-345
11	#133-150	26	Day off
12	Day off	27	Day off
13	Day off	28	#346-369
14	#151-169	29	#370-390
15	#170-187	30	#391-413
		31	Staff meeting

Do you have this kind of information about your target groups and your health workers' assignments and performance? If you do not, then summarise the information you need in Worksheet B. For each PHC service you offer, you should have routine information to: 1) identify the people who need the service (for target-setting); 2) schedule work to provide the service to them (work planning); and 3) make sure that the health workers provide the right service to the right people at the right time (performance assessment).



QUESTION 4. DO YOU HAVE ADEQUATE INFORMATION ABOUT CHANGES IN MORBIDITY AND MORTALITY?

It is especially important in developing countries to monitor changes in disease patterns. Outbreaks of cholera, a case of polio, changes in the nutrition status of young children, an increase in deaths, all need to be monitored and identified promptly so that action can be taken to deal with the problem quickly.

Sometimes this data can be collected through routine reporting systems, including vital event registration systems. Vital event systems are not often found in developing countries, but PHC programmes can set them up. Some programmes set up "sentinel" systems. These are usually health facilities that are designated to report information regularly on the number of cases of certain diseases that occur in their catchment areas. Special surveys, such as the rapid surveys in Module 2, can also be used to collect data on morbidity and mortality. Case/outbreak investigations are another method. This usually involves a detailed investigation of an unusual and serious event, such as a maternal death or an outbreak of hepatitis.

**Surveillance
systems**

Module 4 describes the basic indicators of morbidity and mortality to be included in a PHC surveillance system. It describes how to set up a surveillance system, how to monitor the incidence and rates of diseases, how to identify the causes of mortality and morbidity, and how to use that information to improve programme planning and implementation.

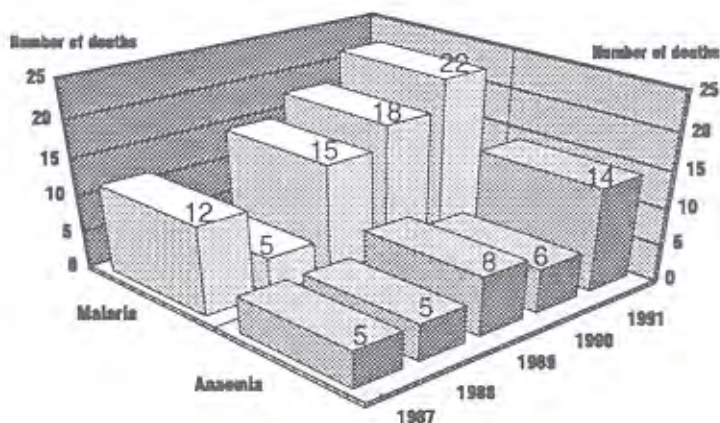
Exhibit 3 illustrates one of the products of a surveillance system. This is a chart showing a five-year trend in deaths due to anaemia and malaria.

If you are interested in setting up a surveillance system for your PHC programme, write that down in Worksheet B.

If you already have an idea of the major health indicators you need to monitor, write those in Worksheet A. Or review Module 4 first. It can help you identify indicators that are appropriate for your programme and show you how to set up a system to meet your needs.



Exhibit 3: Anaemia and malaria deaths 1987 - 1991



QUESTION 5. DO YOU HAVE ADEQUATE INDICATORS TO MONITOR YOUR PHC SERVICES?

Regular monitoring of PHC services is very important for three reasons. First, you want to make sure that the services are provided as planned. Second, you want to know when something goes wrong so that you can fix it. Third, you want to make sure that any changes you make are carried out as planned and that they actually work.

To do that you need to have certain crucial pieces of information about each of your PHC services. In general, you will want to know: 1) are the resources (staff, equipment, supplies, etc.) adequate; 2) are the expected services and products being provided; and 3) are the target groups learning what they need to know and doing what they need to do?

Module 5 is designed to help you identify those crucial pieces of information so that you can put them into your information system. The first part of this module contains lists of important indicators for each of the PHC services. An excerpt is shown in Exhibit 4. The second part contains



lists of management indicators, which are discussed later (see question 7).

Exhibit 4: Excerpt from Module 5: Monitoring and evaluating programmes

11. Oral rehydration therapy

Effect indicators

- 11.3 Number or percentage of mothers who know how to prepare ORS solution, SSS or local name.
- 11.4 Number or percentage of mothers who know how to administer ORS solution, SSS or local name.
- 11.5 Number or percentage of mothers who used ORS solution or a recommended home fluid (total volume increased) and continued feeding during their child's last diarrhoea episode (last month).

Output indicators

- 11.8 Number or percentage of health workers who counsel mothers on preparation and administration of ORS solution.
- 11.9 Number or percentage of health workers who correctly showed the mother how to prepare and administer ORS solution.

Input indicators

- 11.10 Number or percentage of health units which experienced stock shortages of ORS packets in the last month.
-

The indicators are organised by PHC service and system categories. The **impact** indicators tell you whether the programme is improving health status. The **effects** indicators tell you whether the PHC service is working. Is it having the desired effect on the target group? Are they learning what they need to know and doing what they need to do? The **output** indicators tell you whether the project is providing the target groups with the services and products they need. And the **input** indicators tell you whether the critical resources are adequate to produce the services and products.

Module 5 helps you identify key points in the process to monitor. If something does go wrong, you will have an idea of where it happened and be able to take action quickly.



**Monitoring
indicators**

Module 5 will also help you identify the parts of your service delivery **strategy** that need the most attention. Most PHC projects provide services through a combination of fixed facilities, outreach, community participation, and referrals. Module 5 can help you identify the indicators that will be most useful for monitoring the activities of each.

Every good management information system should include indicators to monitor service inputs and outputs on a routine basis, as well as periodic surveys to assess programme processes, effects, and impacts.

You may want to examine your monitoring system to be sure that it includes at least one key indicator from each stage in the system. Module 5 can help you select a few simple indicators of inputs, outputs, and effects for each of your PHC services. You can enter the ones you select into Worksheet A, either now or later. This module also shows you how to set up your own MIS (Management Information System) and provides guidelines for collecting and processing indicator data on a temporary or routine basis.

If you think that you need to improve your monitoring of PHC services, write that down on Worksheet B, even if you do not know exactly which indicators you need at the moment.

QUESTION 6. DO YOU KNOW ENOUGH ABOUT THE QUALITY OF YOUR PHC SERVICES?

Quality assessment concentrates largely on the service delivery **processes** and key resources (supplies, staff, etc.). **Module 6** is a series of checklists that can be used by managers and supervisors to identify the strengths and weaknesses of each PHC service.

This is another very important piece of information about the service delivery system. Module 6 will help you look at **processes**, i.e., the way services are provided. How much do you know about how people are processed through your programme? How well are they treated by staff? Are they given the essential information they need? Do they understand what is going on and what they should do? Are medical, education, and counselling standards adequately followed?



Exhibit 5: Example from Module 6. Checklist for acute respiratory infection

For observation of service delivery, mark "yes" if the service provider carries out these activities during service delivery. For interview questions, mark "yes" if the respondent answers correctly.

1. _____ Health facility
2. _____ Service provider
3. _____ Observer/supervisor
4. _____ Date

Take medical history

Did the service provider :

5. YES ___ NO _____ Ask about presence/level of fever?
6. YES ___ NO _____ Ask about duration of cough?
7. YES ___ NO _____ Ask about activity level?
8. YES ___ NO _____ Ask about ability to drink?
9. YES ___ NO _____ Ask about presence of sore throat?
10. YES ___ NO _____ Ask about presence of earache?
11. YES ___ NO _____ Ask about any past history of respiratory problems (asthma)?
12. YES ___ NO _____ Ask about family history of TB or other respiratory illness?
13. YES ___ NO _____ Ask about any treatment administered?

Conduct physical examination

Did the service provider:

14. YES ___ NO _____ Assess general status (alertness, muscle)?
15. YES ___ NO _____ Count respiratory rate?
16. YES ___ NO _____ Take temperature?
17. YES ___ NO _____ Observe breathing for chest indrawing?
18. YES ___ NO _____ Listen for stridor, wheeze, and/or hoarseness?
19. YES ___ NO _____ Auscultate chest?
20. YES ___ NO _____ Examine throat for discharge, enlarged tonsils, or inflamed pharynx?
21. YES ___ NO _____ Examine neck for tender glands?
22. YES ___ NO _____ Examine ears?
23. YES ___ NO _____ Observe colour of lips, ears, face, and nail beds?



**Quality
Checklist**

This is one of the most popular modules in the PHC MAP series because it helps managers and supervisors to assess the quality of each PHC service quickly and objectively.

The checklists are based on exhaustive expert and field experience. They can be easily adapted to fit local conditions. And they can be used to assess the work of an individual health worker, the work of a group of workers, a PHC service, or all services of the programme.

If quality of service is a concern and you do not have adequate information about the quality of each of your PHC services, then you may want to use Module 6. If you know the indicators that you are especially interested in having, list them in Worksheet A. Or you can do this later after going through the module. But if you want to examine the quality of your PHC services, write that down in Worksheet B, even if you don't have the specific indicators at this time.

An excerpt from the checklist on acute respiratory infection (ARI) is shown to give an idea of the content of these tools. Each checklist includes the major steps in the service process, the essential supplies and equipment, and perspectives of clients and service providers. The assessments are carried out through observation of services, limited inventories of key supplies and equipment, and brief interviews with some clients and providers. Discussion guides, which can be used for semi-structured interviews as well as focus group discussions, are also included.

If you are only interested in information about PHC services, you can stop here and set priorities among your information needs. However if you are also interested in examining your programme's **management services** (planning, training, supervision, etc.), then continue.

PHC management, costs, and sustainability

The purpose of the last four questions is to help you determine whether you are collecting adequate information about the way the PHC programme is managed and the effects that management has on the programme's resources and operations. If not, you may find Modules 5, 7, 8, and 9 helpful.



QUESTION 7. DO YOU HAVE ADEQUATE INDICATORS TO MONITOR YOUR MANAGEMENT SERVICES?

Good management support is often a prerequisite to successful PHC programmes. A recent assessment of eight PHC programmes funded by the Aga Khan Foundation

Management is one of the most crucial determinants of successful primary health care. Good planning, co-ordination, staffing, supervision, monitoring and evaluation all contribute.¹

concluded that managers need information about management services as much as they do about PHC services. They need to know whether training is being carried out as planned; whether supervision is having the desired effect on health worker performance; whether the logistics system is keeping essential supplies and equipment available; and whether the community organisation strategy is leading to better PHC services.

The following are the 8 management services that are included in the PHC MAP modules. These have been selected because experience has shown that they are the most important ones that most PHC service programmes include.

PHC management services

Planning

Personnel

Training

Supervision

Finances

Logistics

Information systems

Community organisation

¹ Reynolds, J. and Stinson, W. *Lessons Learned from Primary Health Care Programmes Funded by the Aga Khan Foundation*. Aga Khan Foundation, Geneva and Washington DC, June, 1991.



Most PHC managers are responsible for only some management services. Training may be done at the central or regional rather than local level. Logistics management may be limited to sending in requests to a central warehouse for needed supplies. But the programme may be completely responsible for community organisation and supervision of health workers. Usually, managers should be most interested in the management services that they control, since there is not much they can do about those that they do not control.

If you are not monitoring some of these activities or are not sure what would be appropriate indicators for monitoring management services, then take a look at the second section of Module 5. It contains lists of indicators for each of the management services listed above. These indicators are arranged in the same categories as the PHC Service indicators, that is, Inputs, Outputs, and Effects. Exhibit 6 shows some of the training indicators.

Exhibit 6: Excerpt from Module 5. Monitoring and evaluating programmes

2. TRAINING

Effect indicators

- 2.1 Number or percentage of participants in training who showed improvement between the pre- and post-tests.

Output indicators

- 2.2 Number or percentage of health workers having received training or refresher training in the last period for any intervention (or for specific interventions).
- 2.3 Number or percentage of training sessions that allowed participants to put new knowledge and skills into practice during training (using real life cases or role play).
- 2.4 Number or percentage of training sessions in which technical content was complete and accurate.

Input indicators

- 2.5 Number or percentage of health units using programme-specific information (from MIS or supervision) about service quality to plan or focus training sessions given in the last period.
-



You can enter your priority indicators in Worksheet A. And if you think you need to improve your monitoring of management, write that down in Worksheet B, even if you do not know exactly which indicators you need at this time.

This list of indicators should tell you whether you need Module 5, and if so, where it would be most helpful to you. As noted before, this module also can help you to identify the strategic services that need attention (outreach, clinic services, etc.) and can help you set up a project-specific MIS.

QUESTION 8. DO YOU KNOW ENOUGH ABOUT THE QUALITY OF YOUR MANAGEMENT SERVICES?

Module 7 is similar to Module 6 as it contains checklists for assessing your management processes (see Exhibit 7). This can be used by managers, supervisors, and others to identify the strengths and weaknesses of each management service in the PHC programme.

If quality of management is a concern, and you do not have adequate information about the quality of your management services, then write down in Worksheet B the services that you believe should be examined.

QUESTION 9. DO YOU HAVE ENOUGH INFORMATION ABOUT THE COST OF YOUR PROGRAMME AND ITS SERVICES?

Module 8 can help you put this kind of information together. You can examine costs and revenues over time, compare the costs of the various PHC services, compute unit

Module 8 : Cost analysis

1. The total amount of resources spent
 2. Expenditures compared with budgeted amounts
 3. Distribution of costs by line item
 4. Distribution of costs by site, facility, or location
 5. Trends in costs over time
 6. Projection of future costs
 7. Average costs
 8. Analysis of revenues, past and projected
 9. Break-even analysis, when revenues equal or exceed expenditures
-



Exhibit 7: Excerpt from Module 7. Assessing the quality of management information systems monitoring

An information system is organised around key indicators that measure a programme's progress. It is a systematic way of collecting, reporting, and using data at all programme levels.

This checklist is intended for use in the assessment of management information systems. Its objective is to help managers to enhance the quality of their programmes by identifying and resolving problems in the management information systems area. It can be adapted for use in both vertical programmes and integrated PHC efforts. The questions below can be answered through interviews, document review, observation of management services, or a review of the health facility. Some questions ask for the respondent's opinion about the quality or adequacy of specific tasks; in such cases the perspectives of managers, health service providers, and community members should be taken into account. Areas that are deemed inadequate can be further explored through focused discussions with key informants. With modification, the checklist can be used as a basis for an open-ended interview or group assessment.

1. _____ Health facility
2. _____ Service provider
3. _____ Observer/supervisor
4. _____ Date

Planning the information system

Health service indicators monitor the performance of a system or programme. An information system is a group of these indicators that reveals the status of the programme. These questions will help you determine if a basic information system is in place.

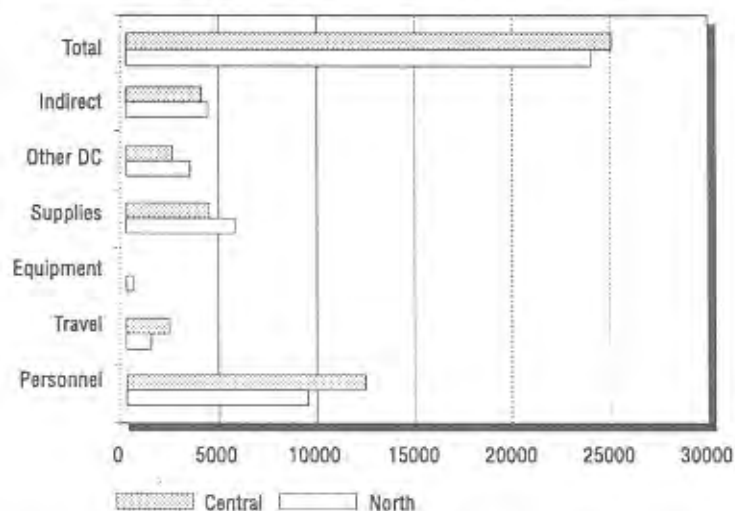
5. YES ___ NO ___ Is there a list of indicators to be monitored at district level?
6. YES ___ NO ___ Is there a list of indicators to be monitored at health centre level?

Do these lists include indicators of:

7. YES ___ NO ___ Resource availability?
8. YES ___ NO ___ Access?
9. YES ___ NO ___ Utilisation?
10. YES ___ NO ___ Coverage?
11. YES ___ NO ___ Service quality?
12. YES ___ NO ___ Outcome?
13. YES ___ NO ___ Have information sources been identified for each indicator?
14. YES ___ NO ___ Has the frequency of collection/compilation for each indicator been established?
15. YES ___ NO ___ Has an analysis procedure for each indicator been established (including thresholds or standards)?
16. YES ___ NO ___ Have mechanisms for interpreting and discussing results been established?



Exhibit 8: Excerpt from Module 8
Figure 2: North and Central expenditures



costs, compare expenditures with your budget, and so forth. Module 8 actually shows you how to do 9 different types of analysis, which are summarised below.

The first pages of this module display various cost graphs that the module's computer programs generate. One of these is shown above.

You can use the module to examine costs in various ways :

- By LOCATION (geographic area)
- By FACILITY (health centres, hospitals, depots)
- By PHC SERVICE (ORT, immunization clinic services)
- By BUDGET LINE item (personnel, travel, equipment)

Some managers have accounting systems that produce some of this information or could do so with very little additional effort. Others will have to put in a good deal of effort to classify their expenditures by type of PHC service, clinic site, time period, etc. For some managers, especially those who have no control over their budgets, cost analysis may not seem to be worth the effort. However, our field tests have shown that when managers can demonstrate



what PHC services actually cost, they can argue more forcefully in defence of their budgets.

Many managers also have control over some portion of their budgets and can shift funds from one area to another, within limits, of course. Knowing what the costs are of the various services can help managers make better reallocation decisions.

Finally, as decentralisation of authority and responsibility for PHC expands, more managers will find themselves needing good cost information for planning their programmes and for monitoring expenditures.

Experience has shown that it is not difficult nor time-consuming to conduct a cost analysis by budget line items. However, it is difficult to compute the costs of each PHC service (e.g., immunization) and their unit costs (e.g., the cost per child immunized). If this type of cost analysis is desired, it is best to do the analysis prospectively (i.e., from now on). That is, the cost categories should be set up and costs classified on an ongoing basis. This will not only be easier, but more accurate than trying to do the analysis retrospectively (i.e., by reclassifying past costs).

But even if you cannot be completely accurate, Module 8 will show you how to make reasonable estimates of costs if cost information is important to you.

If you plan to do a sustainability analysis (Module 9), you will probably need cost estimates. Module 8 can help you get that information.

If you do not know the costs of your programme and services, you may want to look at Module 8. The module will help you decide the cost information you need. Write down in Worksheet B any PHC services and management services in your programme for which you need cost information. Write "Overall PHC services" or "Overall management" if you only want total programme cost information.

**Prospective
analysis**

QUESTION 10. DO YOU HAVE ADEQUATE INFORMATION TO DETERMINE HOW TO SUSTAIN YOUR PHC PROGRAMME IN THE FUTURE?

The last in the series, **Module 9**, can help you to develop and analyse various strategies for sustaining the health



status of your target population and the PHC services and resources needed to do that.

While many people look at sustainability only as a funding issue (how will we get the money to continue?), Module 9 starts from goals and works backwards to funding. It first asks you to define your sustainability objectives: Where do you want the programme to be in X number of years? What outcomes should the programme be able to achieve? What services should it be providing?

Next, it asks you to examine 10 factors that are common threats to sustainability, to assess whether they will be important for your programme, and to identify strategies for addressing those that are threats (or opportunities). For example, if the size of your target population increases, that could strain the programme's ability to provide adequate services. If political commitment to the programme declines, that could lead to a decrease in support for the programme. On the other hand, if political commitment increases, that might lead to increased support and allow you to expand services.

The module includes indicators you can use to assess these factors and suggested strategies for dealing with those that could be problems.

Some examples of strategies for dealing with political commitment include: 1) dropping unpopular components; 2) appointing influential leaders to the board or advisory

Sustainability factors

Target group size
 Target group KAP
 PHC service quality
 Management support
 Organisational capacity
 Political commitment
 Personnel resources
 Revenues
 Expenditures
 Environmental factors



committee; and 3) assisting communities in expressing their needs to political leaders and donors.

The module also includes a financial assessment tool so that you can project future revenues and expenditures, taking the above factors and strategies into account.

This analysis enables you to test different assumptions about coverage, service strategies, and revenue and expenditure projections. You enter these assumptions in a "What-If"

Quick start - Basic sustainability analysis

Table 3 : Input estimates - enter revenues and expenses for the current year.

	Current Yr	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Revenues	343	370	400	432	467	504
Expenses	365	381	399	417	435	455
Balance	(22)	(11)	1	15	32	49

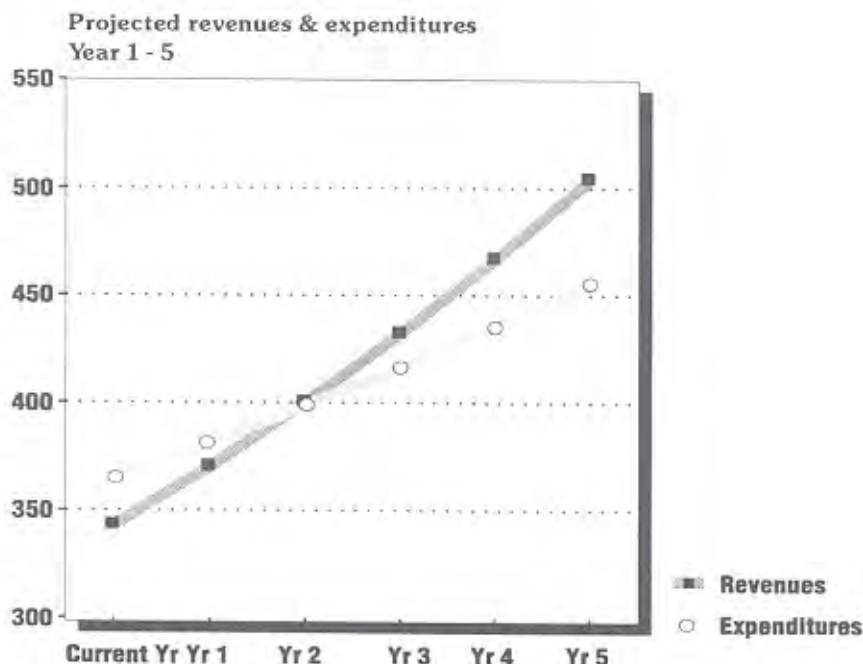
Table 4 : What-if analysis - enter projected annual % increase (+) or decrease (-)

Positive Factors		Negative Factors	
(A + will increase revenues or decrease costs)		(A + will increase costs or decrease revenues)	
(A - will decrease revenues or increase costs)		(A - will decrease costs or increase revenues)	
Revenues (+R)	6.0%	Expenses (+E)	3.0%
Organisational Capacity (-E)	3.0%	Inflation (+E)	5.0%
In-kind Contributions (-E)	0.0%	Target Population Size (+E)	3.0%
Political Commitment (+R)	5.0%	Target Population Coverage (+E)	5.0%
Environmental Factors (+R)	+3.0%	Personnel Resources (+E)	1.0%
		PHC Service Quality (+E)	-5.0%
		Management Support (+E)	-4.5%



table and receive the results in a five-year projection of revenues and expenditures. The module's computer program produces figures shown in Table 3 and the accompanying graph, based on the information you feed into the What-If analysis.

Exhibit 9: Excerpt Module 9. Sustainability Analysis



If you do not know whether or how to sustain your programme, your PHC services, or your management services, you may want to look at Module 9. If so, write that down in Worksheet B.



Appendix A:

Setting priorities among information needs

If you have been filling out Worksheets A and B as you've gone through these questions, then you should have a summary of your programme's goals, principal target groups, health and management services, coverage objectives, key indicators, and information needs. If you haven't done this yet, now would be a good time to do so.

You may be able to determine your priorities by just reading over Worksheet B. If that is not possible or if you have too many "high priority" needs, then the following suggestions may help you to determine where to begin.

1. Convene a group. List the information needs on a board or on a handout. Ask each person to rank each item. Give the lowest item a score of 1, the next lowest 2, and so forth. The highest ranked item would have the highest score. Then total the scores of the group. Discuss the results. Don't just accept the scores. Try to come to a consensus as to which information is highest priority, next highest, and so forth.

2. Identify rating criteria. Design a matrix to give each item a score along 2, 3, or 4 criteria, such as:

- **Importance:** How great is the need for this piece of information?
- **Cost** to collect and process: How easy will it be to obtain this information?
- **Utility:** How useful will this information be for planning and/or evaluation?

Then do as above: rate each information item on each selected criterion, as shown below:

Information	Importance	Cost*	Utility	Total
Quality assessment : ANC	5	6	6	17
Quality assessment : Imm	5	6	6	17
Community survey : needs	8	5	8	21
Cost analysis : PHC	4	4	4	12
Surveillance system	7	2	5	14

* The lower the cost, the higher the score, and vice versa.





Appendix B Worksheets

WORKSHEET A: DEFINING SERVICE INDICATORS Instructions: 1) List each priority PHC or management service; 2) Identify key indicators you need for planning and/or monitoring; 3) Identify those that are already available (mark with an x); 4) Identify the low, medium and high priority items (e.g. with *, **, and ***); 5) Revise and update this list as you proceed through Module 1 and other modules.

TARGET GROUP	INPUTS (resources)	PROCESSES (activities)	OUTPUTS (products and services)	EFFECTS (knowledge, attitudes, behaviour/ practice)	IMPACTS (morbidity, mortality, fertility)

WORKSHEET B: SUMMARISING INFORMATION NEEDS Instructions: 1) After you list each question, summarise your general information needs for each type of information under the appropriate module; 2) Identify the specific type of indicators needed (if known); 3) Set priorities for each need(e.g., * for low, ** for medium, and *** for high)			
MODULE	GENERAL INFORMATION NEEDS	SPECIFIC INDICATORS	PRIORITIES



Acronyms and abbreviations

AIDS	Acquired immune deficiency syndrome
AKF	Aga Khan Foundation
ANC	Antenatal care
ARI	Acute respiratory infection
BF	Breast feeding
CHW	Community health worker
DK	Don't know
FP	Family planning
GM	Growth monitoring
HW	Health worker
IEC	Information, education, communication
KAP	Knowledge, attitudes, practice (behaviour)
MIS	Management information system
MOH	Ministry of Health
NGO	Non-governmental organisation
NR	No response
ORS	Oral rehydration salts
ORT	Oral rehydration therapy
PHC	Primary health care
PHC MAP	Primary Health Care Management Advancement Programme
PNC	Postnatal care
PRICOR	Primary Health Care Operations Research
SSS	Sugar-salt solution
STD	Sexually-transmitted disease
TB	Tuberculosis
TBA	Traditional birth attendant
TFR	Total fertility rate
TT	Tetanus toxoid
WHO	World Health Organization



Glossary

Catchment (area): The geographic area surrounding one or more health facilities. It refers to the population residing in that area, which includes the programme's target groups.

Community health worker (CHW): A person indigenous to the community who provides selected basic and limited health services to members of the community. Includes village health workers, health guides, and other terms.

Coverage: The proportion of a target group that has received a service or is protected from a disease or health problem.

Goals: The impact your programme hopes to have on health. Goal statements specify improvement desired, target group, amount of change expected and date for achievement.

Indicator: An indirect measure of an event or condition. For example, a baby's weight for age is an indicator of the baby's nutritional status.

Information audit: A systematic assessment of information needs compared with information currently collected.

Inputs: Resources (human, materials and supplies, equipment and facilities, information and money).

Management: The art and science of getting things done through people.

Objectives: The output and/or effect your PHC programme hopes to have.

Outcomes: Results of your PHC programme, including outputs, effects and impacts.

Outputs: Products and services provided by a PHC programme.

Effects: Changes in knowledge, skills, attitude, and behaviour (including coverage) as a result of a PHC programme.

Impacts: Changes in health status (mortality, morbidity, disability, fertility) as a result of a PHC programme.

Primary health care: Essential health care, accessible at affordable cost to the community and the country, based on practical, scientifically sound and socially acceptable methods. It includes at least ten components: health education, proper nutrition, water supply, basic sanitation, maternal and child health care, immunization, control of common diseases and injuries, prevention of local endemic diseases, essential drugs.

Processes: Activities or tasks carried out through the PHC programme.

Register: A written or printed record containing regular entries of events or other items, such as name, address, births, deaths, symptoms, treatments



Risk factor: A characteristic of an individual or group that is associated with an increased chance of contracting a disease, having a health problem, or dying.

System: A set of discrete, but interdependent, components designed to achieve one or more objectives.

Target group: Specific groups of people designated to receive a PHC service, such as children under age 3.



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MODULE 1

USER'S GUIDE

